

Work Order ID 106566

106566

Page 1

September-06-13 1:17:29 PM

Item ID: D350-591-133

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Aft Maintenance Step (Fits LH or RH)

Start Date: 9/06/13

Start Qty: 5.00

5 4

Cust Item ID:

Required Date: 9/20/13

Req'd Qty: 5.00

5 4

Customer:

Reference:

Approvals:

Process Plan: W

Date:

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

D2946

Rev B

100

0.00

100

DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile and type labels as per PPP D350-591-133 CHG003

DAS
31
9-89

13-10-16

MLJ 13-10-16
4

110

0.00

110

Large Fab

Large Fab

Memo

0.00

Large Fab

1-Cut D2622-120 extrusion to 62.06" long as per Dwg D2946

2-Deburr

Ensure that 57.09" minimum extrusion is kept and identify to be used for D350-591-215/-216.

4

6

13-10-03

Work Order ID 106566

106566

Page 2

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Item ID: D350-591-133 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Aft Maintenance Step (Fits LH or RH)
 Start Date: 9/06/13 Start Qty: 5.00 *5* Cust Item ID:
 Required Date: 9/20/13 Req'd Qty: 5.00 *5* Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC6- Inspect dimensions to drawing	0.00							
120				4x				13-10-02	
QC	Memo	0.00							
Quality Control									
130		0.00							
130	Large Fab					4	0		
Large Fab	Memo	0.00							13-10-03
Large Fab	1-Deburr and Bevel ends for welding								
	2-Weld (1) End Cap and (2) Lugs using Jig DT8440 as per Dwg D2946								
	A/RAluminum Rod 123928								
	126430								
	3-Grind End Cap welds flush								
140	QC9- Inspect visual per QSI004- Fusion Welds	0.00							
140									
QC	Memo	0.00							
Quality Control									

13-10-03 60
 4x 13-10-08

Work Order ID 106566

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Item ID: D350-591-133

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Aft Maintenance Step (Fits LH or RH)

Start Date: 9/06/13 Start Qty: 5.00 *5*

Cust Item ID:

Required Date: 9/20/13 Req'd Qty: 5.00 *5*

Customer:

Reference:

Run Start *NR1*

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop *NR2*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	QC5- Inspect part completeness to step on W/O	0.00							(DAS) 09 9-89
150									
QC	Memo	0.00							
Quality Control									
						4x	13-10-08		
160	Chemical Conversion Coat per QSI005 4.1	0.00							
160									
HandFinish	Memo	0.00							
Hand Finishing									
						4	13-10-11		
170	QC3- Inspect Part Finish	0.00							
170									
QC	Memo	0.00							
Quality Control									
						4	13-10-15		(DAS) 19 9-89

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4

13.10.15

Work Order ID 106566

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Item ID: D350-591-133

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Item Name: Aft Maintenance Step (Fits LH or RH)

Stop ***NS2***

Start Date: 9/06/13 Start Qty: 5.00 ***5***

Cust Item ID:

Required Date: 9/20/13 Req'd Qty: 5.00 ***5***

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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210 Chemical Conversion Coat per QSI005 4.1 0.00

210

HandFinish

Memo

0.00

Hand Finishing

4 26/13-10-16

220 White Gloss(Ref:4.3.5.1) per QSI005 4.2-Alum 0.00

220

Powdercoat

Memo

0.00

Powder Coating

START TIME: 9:30
OVEN TEMPERATURE: 300°
FINISH TIME: 10:00

4 13-10-16

DAS
34
9-89

230 Wing Walk as per dwg QSI005 4.4 Batch M/27 0.00

230

HandFinish

Memo

0.00

Hand Finishing

4x 13/10/16

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Item ID: D350-591-133

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Aft Maintenance Step (Fits LH or RH)

Start Date: 9/06/13 Start Qty: 5.00 *5*

Cust Item ID:

Required Date: 9/20/13 Req'd Qty: 5.00 *5*

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

240 QC3- Inspect Part Finish

0.00

240

QC

Memo

0.00

Quality Control

250

Pick Kit

0.00

250

Packaging

Memo

0.00

Packaging

260

QC4- 100% Inspect kits for completeness

0.00

260

QC

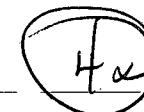
Memo

0.00

Quality Control

DAS
31
9-89

13-10-16



13-10-16

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Item ID: D350-591-133 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Aft Maintenance Step (Fits LH or RH)
 Start Date: 9/06/13 Start Qty: 5.00 *5* Cust Item ID:
 Required Date: 9/20/13 Req'd Qty: 5.00 *5* Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
270		0.00							
270	Packaging								
Packaging	Memo <i>PK</i>	0.00							
Packaging	Identify and pack for shipping as per PPPD350-591-133								
	Location: <i>060</i>								
	PPP Rev: _____								
280	QC21- Final Inspection - Work Order Release	0.00							
280									
QC	Memo	0.00							
Quality Control									

Hx *SA* *13-10-16*

MLS *13-10-16*

MF
13-10-16

Picklist Print

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Page 1

Work Order ID: 106566

Parent Item: D350-591-133

Parent Item Name: Aft Maintenance Step (Fits LH or RH)


Start Date: 9/06/13

Required Date: 9/20/13

Start Qty: 5.00

Required Qty: 5.00

Comments: IPP Rev:B05.10.14Modified step 10KJ/EC
IPP Rev:B06.07.19D2946 @ rev.b EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
AN4-11A Bolt		Purchased	No			250	Each	317.0000		20-16	DAS 33	9-89	

Location	Loc Qty	Loc Code
FG	20	
120731	20	
ST356	143	
M126073	43	
M126105	100	
ST514	104	
M126333	104	
ST517	50	
124221	50	

126333

AN4-14A
BOLT

Purchased No

250 Each 635.0000



4032

DAS
33
9-89

13-10-16

Location	Loc Qty	Loc Code
FG	5	
122141	5	
ST007	20	
121349	20	
ST351	3	
124215	3	
ST357	7	
115374	1	
123352	6	
ST514	400	
M126105	400	
ST517	200	
124221	200	

126105

DAS
31
9-89

Picklist Print

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Page 2

Work Order ID: 106566

Parent Item: D350-591-133

Parent Item Name: Aft Maintenance Step (Fits LH or RH)

Start Date: 9/06/13

Required Date: 9/20/13

Start Qty: 5.00

Required Qty: 5.00

AN4-16A
BOLT

Purchased No

250 Each 344.0000

8

4032

DAS
33
9-89

DAS
6
9-89

DAS
31
9-89

Location

Loc Qty

Loc Code

FG 5
121541 5
ST357 8
124215 8
ST514 247
125427 200
M126073 47
ST515 84
125396 84

125427

AN4-7A
Bolt

Purchased No

250 Each 292.0000

2

108

DAS
33
9-89

DAS
6
9-89

DAS
31
9-89

Location

Loc Qty

Loc Code

ST355 92
123352 5
124215 3
m125750 84
ST514 200
m126193 200

125750

AN960JD416
Washer

NAS1149D0463J Purchased

No

250 Each 0.0000

14

7056

DAS
33
9-89

DAS
6
9-89

DAS
31
9-89

13-10-16

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Shop Packet Print

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Picklist Print

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Page 3

Work Order ID: 106566
 Parent Item: D350-591-133
 Parent Item Name: Aft Maintenance Step (Fits LH or RH)

Start Date: 9/06/13

Required Date: 9/20/13

Start Qty: 5.00

Required Qty: 5.00

D2230-1
 MOUNTING LUG

Manufactured No

250 Each 305.0000

4

20-16

DAS
 33
 9-89

DAS
 31
 9-89

Location

Loc Qty

Loc Code

FG	4
84136	4
GA	28
101834	28
ST469	273
101834	87
102280	48
89783	16
95217	120
96247	2

101834

D2230-3
 MOUNTING LUG

Manufactured No

250 Each 509.0000

4

20-16

DAS
 33
 9-89

13-10-16

DAS
 31
 9-89

Location

Loc Qty

Loc Code

FG	4
89045	4
ST469	505
101450	61
101495	4
101911	268
102326	100
102758	44
89782	19
90514	1
94957	4
97815	2
97903	2

101450

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Work Order ID: 106566

Parent Item: D350-591-133

Parent Item Name: Aft Maintenance Step (Fits LH or RH)

Start Date: 9/06/13

Required Date: 9/20/13

Start Qty: 5.00

Required Qty: 5.00

D2622-120C
Step Extrusion

Manufactured No

110 Each 146.2700 0.52

2.1
2.6
13.10.03

Location	Loc Qty	Loc Code
WA003	146.27	
101765	107.8	
81507	4	
89750	7.87	
98024	2.1	
99789	24.5	

D2732-
Rubber Extrusion
cut (8) at 3.00"

Manufactured No

250 f 198.3762

2 10 8
105477
DAS 33
9-89

Location	Loc Qty	Loc Code
ST410	198.3762052	
70987	0.3	
83560	3.5962052	
94725	194.48	

D2734
Step End Plate

Manufactured No

130 Each 270.0000

2 10
13.10.16

Location	Loc Qty	Loc Code
WA003	270	
102618	98	
105712	150	
80682	6	
84563	10	
91761	6	

4+4

Picklist Print

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Work Order ID: 106566

Parent Item: D350-591-133

Parent Item Name: Aft Maintenance Step (Fits LH or RH)

Start Date: 9/06/13

Required Date: 9/20/13

Start Qty: 5.00

Required Qty: 5.00

D2856-400

Manufactured No

250

f

295.5992

1.26

635.04

DAS

33

9-89

ABRASION STRIP 4" WIDE (PER FOOT)

(2X) 4.00" X 7.20" per dwg

DAS
31
9-89

Location

Loc Qty

Loc Code

ST408

253.4052632

212.4

101773

99378

41.0052632

ST410

0.72

95159

0.72

ST415

41.4739

63735

0.6696

68076

0.3149

71164

8.46

81875

6.398

86905

0.9569

89352

24.6745

101773

D2944

Manufactured No

130

Each

52.0000

2

10

Step Mounting Plate

Location

Loc Qty

Loc Code

WA003

52

104654

40

73427

4

95200

8

8

D2945

Manufactured No

250

Each

28.0000

1

54

DAS

33

9-89

Mounting Plate

Location

Loc Qty

Loc Code

ST022

28

94542

27

94994

1

94542

DAS
31
9-89

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Shop Packet Print

Page 5

Picklist Print

September-06-13 1:17:29 PM

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Work Order ID: 106566

Parent Item: D350-591-133

Parent Item Name: Aft Maintenance Step (Fits LH or RH)

Start Date: 9/06/13

Required Date: 9/20/13

Start Qty: 5.00

Required Qty: 5.00

MS21042L4

Locknut

Purchased

No

250

Each

5,081.0000

14

70 56

DAS

33

9-89

13-10-16

DAS
51
98

Location

Loc Qty

Loc Code

FP001

50

122452

38

8182

12

ST314

10

m125708

10

st507

56

125535

23

m126073

33

ST509

4000

m126275

4000

ST510a

775

m126333

775

ST518

190

124231

190

126275

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Shop Packet Print

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DART

D2946 STEP ASSEMBLY PARTS LIST

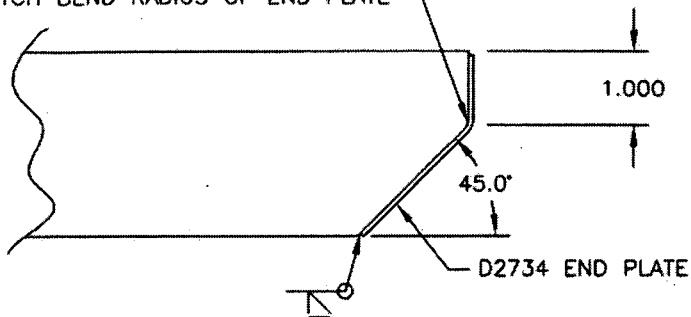
Part No.	Description	QTY
D2946	Step Assembly	X
D2822-63	STEP EXTRUSION*	1
D2734	END PLATE	2
D2944	STEP MOUNTING PLATE	2

*cut per drawing

NOTE: ALL WELDS SHALL BE
100% VISUALLY
INSPECTED BY A
QUALIFIED INSPECTOR
PER DART QSI 004

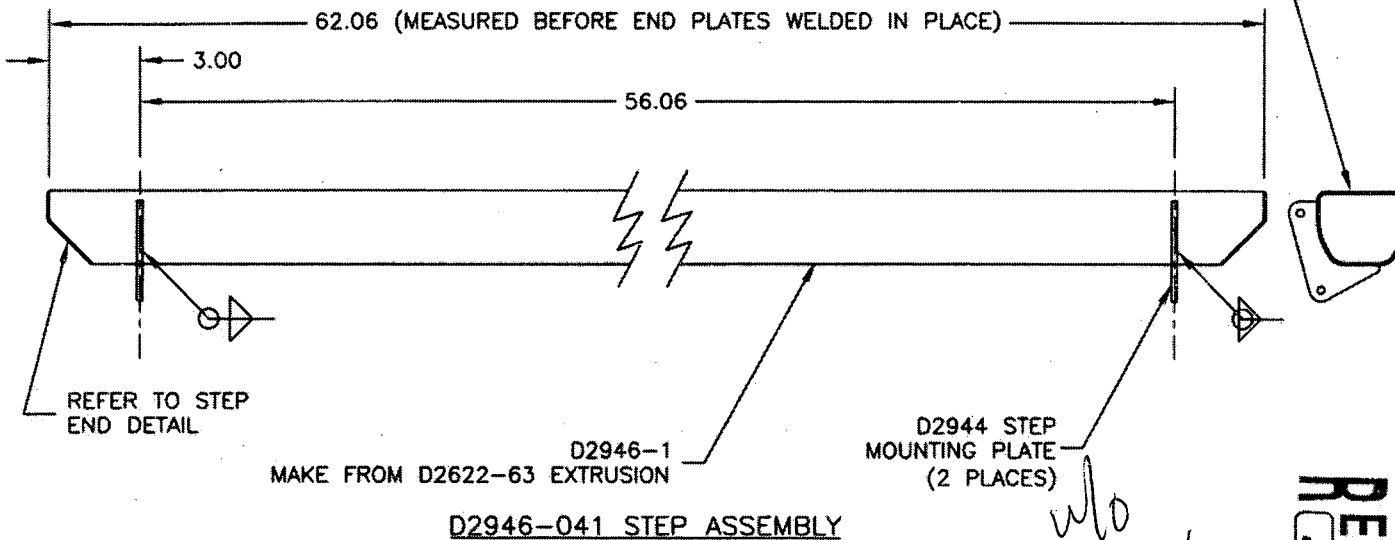
APPLY BLACK ANTI-SKID
ON TOP SURFACE TO
BOTTOM OF TOP RADIUS

ROUND CORNER OF EXTRUSION TO
MATCH BEND RADIUS OF END PLATE



TYPICAL STEP END DETAIL
NOT TO SCALE



APPLY BLACK ANTI-SKID
ON TOP SURFACE TO
BOTTOM OF TOP RADIUS



D2946 STEP ASSEMBLY

- 1) MAKE FROM D2622 STEP EXTRUSION
- 2) WELD PER DART QSI 004
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT ENTIRE ASSEMBLY WHITE (4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT PER DART QSI 005 4.4
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

05-11-28-18

DESIGN		DRAWN BY		DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CP		PH			
CHECKED		APPROVED		DRAWING NO.	REV. B
				D2946	SHEET 1 OF 1
DATE				TITLE	SCALE
05.11.14				STEP ASSEMBLY	1:6
A				99.12.13	NEW ISSUE
B				05.11.14	UPDATE FINISHING NOTE

5. PARTS LIST

Qty -111A	Qty -113	Qty -115	Qty -117A	Qty -119	Qty -133	Part Number	Description
X						D350-591-111A	<i>Heli-Access-Step</i> ™, Long Step – High Skid
	X					D350-591-113	<i>Heli-Access-Step</i> ™, Short Step – High Skid
		X				D350-591-115	<i>Heli-Access-Step</i> ™, Short Step – Low Skid
			X			D350-591-117A	<i>Heli-Access-Step</i> ™, Pre-Flight Step
				X		D350-591-119	<i>Heli-Access-Step</i> ™, Long Step – Low Skid
					X	D350-591-133	<i>Heli-Access-Step</i> ™, Aft Maintenance Step
	1					D2310	STEP ASSEMBLY (HIGH-SHORT)
1						D2311	STEP ASSEMBLY (HIGH-LONG)
		1				D2354	STEP ASSEMBLY (LOW-SHORT)
				1		D2355	STEP ASSEMBLY (LOW-LONG)
					1	D2946-041	STEP ASSEMBLY (MAINTENANCE)
4	2	2	2	2		D2171	CLAMP
4	2	2	2	2		D2182B035	CUSHION
					4	D2230-1	MOUNTING LUG
					4	D2230-3	MOUNTING LUG
8	4	4	4	4		D2274	RADIUS BLOCK
			1			D2362-041	SUPPORT BRACKET
2	1			1		D2362-3	SUPPORT BRACKET
		1				D2362-5	SUPPORT BRACKET
2	1	1	1	1	2	D2856-400-720	ABRASION STRIP
					1	D2945	MOUNTING PLATE
2	2	2		2		AN3-37A	BOLT
					2	AN4-7A	BOLT
					4	AN4-11A	BOLT
					8	AN4-14A	BOLT
		4				AN4-16A	BOLT
8	4			4		AN4-20A	BOLT
1	1	1	4	1		AN4-22A	BOLT
4	4	4		4		AN960JD10	WASHER
10	6	2	4	6	14	AN960JD416	WASHER
		4				AN960JD416L	WASHER
2	2	2		2		MS21042L3	NUT
9	5	5	4	5	14	MS21042L4	NUT

Qty -121	Qty -122	Qty -123	Qty -124	Part Number	Description
X				D350-591-121	<i>Heli-Access-Step</i> ™, Short Step – High Skid, LH
	X			D350-591-122	<i>Heli-Access-Step</i> ™, Short Step – High Skid, RH
		X		D350-591-123	<i>Heli-Access-Step</i> ™, Short Step – Low Skid, LH
			X	D350-591-124	<i>Heli-Access-Step</i> ™, Short Step – Low Skid, RH
1				D2351-041	STEP ASSEMBLY (HIGH-SHORT, LH)
	1			D2351-042	STEP ASSEMBLY (HIGH-SHORT, RH)
		1		D2356-041	STEP ASSEMBLY (LOW-SHORT, LH)
			1	D2356-042	STEP ASSEMBLY (LOW-SHORT, RH)
1	1	1	1	D2230-1	MOUNTING LUG
1	1	1	1	D2230-3	MOUNTING LUG
1	1	1	1	D2856-400-720	ABRASION STRIP
2	2	2	2	AN3-37A	BOLT
3	3	3	3	AN4-13A	BOLT
4	4	4	4	AN960JD10	WASHER
6	6	6	6	AN960JD416	WASHER
2	2	2	2	MS21042L3	NUT
3	3	3	3	MS21042L4	NUT

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Revision: G

Date: 08.10.06

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS D350-591 REV. G OR EARLIER
AND

INSTRUCTIONS OF CONTINUED AIRWORTHINESS ICA-D350-591 REV. 2 OR EARLIER

REF CANADIAN STC: SH92-6

REF FAA STC: SH967NE

For D350-591-121/-122/-123/-124/-133 steps, customers have the option of installing D2732-030 cushions under the D2230-1/-3 clamps to accommodate varying crosstube diameters and to improve fit. It is also acceptable to use longer or shorter AN4 bolts, and/or extra AN960JD416 washers under the nut to ensure 1.5 to 4 threads in safety. See Figure 1 on sheet 2 of this service instruction for reference.

For D350-591-121/-122 steps at CHG 005, D350-591-123/-124 steps at CHG 004, and D350-591-133 steps at CHG 003, the parts list of D350-591 Rev. G and ICA-D350-591 Rev. 2 is amended as follows:

ADD:

Qty -121	Qty -122	Qty -123	Qty -124	Qty -133	Part Number	Description
X					D350-591-121	Heli-Access-Step™, Short Step – High Skid, LH
	X				D350-591-122	Heli-Access-Step™, Short Step – High Skid, RH
		X			D350-591-123	Heli-Access-Step™, Short Step – Low Skid, LH
			X		D350-591-124	Heli-Access-Step™, Short Step – Low Skid, RH
				X	D350-591-133	Heli-Access-Step™, Aft Maintenance Step
2	2	2	2	8	D2732-030	CUSHION
2	2	2	2	8	AN4-16A	BOLT

The DSI-9459-011 kit is available for customers with earlier model D350-591-121/-122/-123/-124 steps. Longer AN4 bolts are provided to fasten the clamps. The DSI-9459-013 kit is available for customers with earlier model D350-591-133 steps.







Qty -011	Qty -013	Part Number	Description
X		DSI-9459-011	Rubber Cushion Kit (for -121/-122/-123/-124 steps)
	X	DSI-9459-013	Rubber Cushion Kit (for -133 steps)
2	8	D2732-030	CUSHION
2	8	AN4-16A	BOLT

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED

BY: 
D. SHEPHERD (DE # 02)

DATE: 09.06.24
CERT. NO.: SH92-6
ISSUE NO.: 11

B	AN4-16A WAS -17A FOR -013/-133 KIT	CP	09.06.24
A	NEW ISSUE	CP	09.04.17
REV.	DESCRIPTION	BY	DATE
DESIGN		DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN			
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		DSI 9459	SHEET 1 OF 2
APPROVED		TITLE	SCALE
DE APPR.		OPTIONAL CLAMP MODIFICATIONS	NTS
DATE	09.06.24	<small>COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	